

ABSTRACT

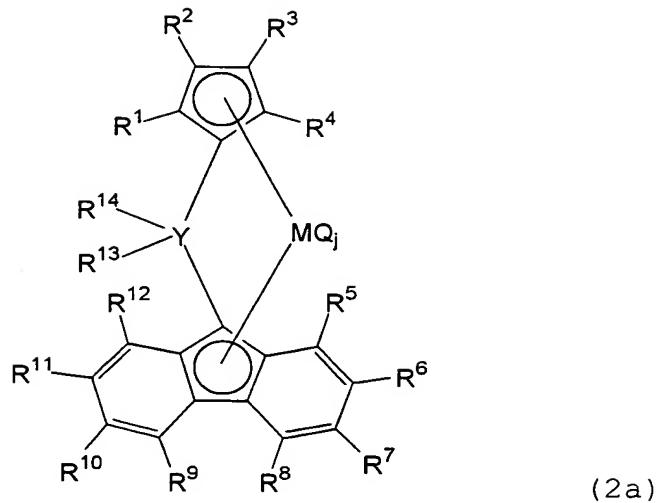
The present invention provides a propylene/1-butene random copolymer (PBR) having excellent flexibility, impact resistance, heat resistance and low-temperature heat-seal properties, a polypropylene composition containing the copolymer, a sheet, film or stretched film comprising the composition and a composite film having a layer of the composition.

The propylene/1-butene random copolymer contains 60 to 10 90 mol% of propylene units and 10 to 40 mol% of 1-butene units and has a triad isotacticity of not less than 85% and not more than 97.5 %, a molecular weight distribution (M_w/M_n) of from 1 to 3, an intrinsic viscosity of from 0.1 to 12 dl/g, a melting point (T_m) of from 40 to 120°C, and satisfies the following 15 relation

$$146 \exp (-0.022M) \geq T_m \geq 125 \exp (-0.032M)$$

wherein T_m represents a melting point and M (mol%) represents a content of 1-butene constituent units.

The invention, further, provides a transition metal compound useful as an olefin polymerization catalyst and an olefin polymerization catalyst containing the transition metal compound. The transition metal compound is represented by the following formula (2a):



wherein each of R^1 and R^3 is hydrogen, R^2 and R^4 are selected from a hydrocarbon group and silicon-containing group, R^5 to R^{13} are selected from hydrogen, a hydrocarbon group and 5 silicon-containing group, and adjacent substituent groups R^5 to R^{12} may be linked to form a ring. R^{14} is an aryl group, and R^{13} and R^{14} may be linked to form a ring. M is a Group 4 transition metal, Y is a carbon atom, Q is halogen, etc, and j is an integer of 1 to 4.